

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference  P034904WO	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No.  PCT/GB2004/003148	International filing date (day/month/year)  20/07/2004	(Earliest) Priority Date (day/month/year)  21/07/2003
Applicant  UNIVERSITY COLLEGE CARDIFF CONSULTANTS LIMITED		
<p>This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.</p> <p>This International Search Report consists of a total of <u>6</u> sheets.</p> <p><input checked="" type="checkbox"/> It is also accompanied by a copy of each prior art document cited in this report.</p>		
<p>1. Basis of the report</p> <p>a. With regard to the <b>language</b>, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).</p> <p>b. <input type="checkbox"/> With regard to any <b>nucleotide and/or amino acid sequence</b> disclosed in the international application, see Box No. I.</p> <p>2. <input checked="" type="checkbox"/> <b>Certain claims were found unsearchable</b> (See Box II).</p> <p>3. <input checked="" type="checkbox"/> <b>Unity of invention is lacking</b> (see Box III).</p> <p>4. With regard to the <b>title</b>,</p> <p><input type="checkbox"/> the text is approved as submitted by the applicant.</p> <p><input checked="" type="checkbox"/> the text has been established by this Authority to read as follows:  NUCLEOCIDE PHOSPHORAMIDATES AS ANTICANCER AGENTS</p>		
<p>5. With regard to the <b>abstract</b>,</p> <p><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p><input type="checkbox"/> the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.</p> <p>6. With regards to the <b>drawings</b>,</p> <p>a. the figure of the <b>drawings</b> to be published with the abstract is Figure No. <u>2</u></p> <p><input checked="" type="checkbox"/> as suggested by the applicant.</p> <p><input type="checkbox"/> as selected by this Authority, because the applicant failed to suggest a figure.</p> <p><input type="checkbox"/> as selected by this Authority, because this figure better characterizes the invention.</p> <p>b. <input type="checkbox"/> none of the figures is to be published with the abstract.</p>		

## INTERNATIONAL SEARCH REPORT

International Application No PCT/GB2004/003148
---

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07H19/10 A61K31/7068 A61K31/7072 A61P35/00
--

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07H A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/109697 A1 (SHEPARD H MICHAEL ET AL) 12 June 2003 (2003-06-12) the whole document -----	1-6,8-26
X	WO 01/07454 A (GROZIAK MICHAEL P ; SHEPARD H MICHAEL (US); CHAN MING FAI (US); NEWBIO) 1 February 2001 (2001-02-01) the whole document ----- -/-	1-6,8-26

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

20 October 2004

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

de Nooy, A

## INTERNATIONAL SEARCH REPORT

International Application No PCT/GB2004/003148
---

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LACKEY D B ET AL: "Enzyme-catalyzed therapeutic agent (ECTA) design: activation of the antitumor ECTA compound NB1011 by thymidylate synthase" BIOCHEMICAL PHARMACOLOGY, PERGAMON, OXFORD, GB, vol. 61, 2001, pages 179-189, XP002204184 ISSN: 0006-2952 figure 1 the whole document -----	1-6,8-26
X	S.A. HARRIS ET AL.: "Synthesis and antiviral evaluation of phosphoramidate derivatives of (E)-5-(2-bromovinyl)-2'-deoxyuridine" ANTIVIRAL CHEMISTRY AND CHEMOTHERAPY, vol. 12, 2001, pages 293-300, XP008037325 figure 1 -----	1-6, 8-21,26

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2004/003148

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: 23 because they relate to subject matter not required to be searched by this Authority, namely:  

Although claim 23 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound.
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see extra sheet

#### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2004/003148

Patent document cited in search report	Publication date	Patent family member(s)			Publication date
US 2003109697	A1 12-06-2003	US 2001034440 A1			25-10-2001
		US 6339151 B1			15-01-2002
		AT 212661 T			15-02-2002
		AU 753155 B2			10-10-2002
		AU 2464699 A			09-08-1999
		BR 9907736 A			17-10-2000
		CA 2317505 A1			29-07-1999
		CN 1291228 T			11-04-2001
		DE 69900841 D1			14-03-2002
		DE 69900841 T2			02-10-2002
		DK 1045897 T3			13-05-2002
		EP 1167972 A2			02-01-2002
		EP 1045897 A1			25-10-2000
		ES 2172303 T3			16-09-2002
		HK 1030624 A1			14-06-2002
		JP 3265304 B2			11-03-2002
		JP 2001220397 A			14-08-2001
		JP 2002500880 T			15-01-2002
		PT 1045897 T			31-07-2002
		WO 9937753 A1			29-07-1999
		US 6245750 B1			12-06-2001
<hr/>					
WO 0107454	A 01-02-2001	AU 775601 B2			05-08-2004
		AU 6231900 A			13-02-2001
		BR 0012677 A			01-07-2003
		CA 2379988 A1			01-02-2001
		CN 1390227 T			08-01-2003
		EP 1200455 A1			02-05-2002
		JP 2003505466 T			12-02-2003
		MX PA02000763 A			12-08-2002
		WO 0107454 A1			01-02-2001
		US 6683061 B1			27-01-2004
<hr/>					